

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A video tape recorder that sequentially forms recording tracks aslant on a magnetic tape and records video data, audio data, and auxiliary data related to the video data and the audio data onto the magnetic tape, comprising:

data compressing means for compressing the video data and the audio data to generate compressed video data and compressed audio data;

pack unit generating means for generating a pack unit by forming compressed video data into a block for each predetermined number of pictures and combining the compressed video data of the block, the compressed audio data corresponding thereto, and the auxiliary data corresponding thereto; and

a recording system that allocates data of the pack unit to a main sector and allocates the auxiliary data of the pack unit to a subcode sector to sequentially form recording tracks based on the main sector and the subcode sector,

wherein the auxiliary data of the main sector includes at least reproduction standard management information, which corresponds to time management information of the video data in a decoding mode and which is disposed in the order of pictures of the video data, and the auxiliary data of the subcode sector includes at least the reproduction standard management information and picture type information that are disposed in the order of pictures of the compressed video data[[.]], and

wherein the pack unit generating means adds, to the main sector, a header data indicating types of auxiliary data that are added to the main sector.

2. (Currently Amended) A video tape recorder that sequentially forms recording tracks aslant on a magnetic tape and records video data, audio data, and auxiliary data related to the video data and the audio data onto the magnetic tape, comprising:

data compressing means for compressing the video data and the audio data to generate compressed video data and compressed audio data;

pack unit generating means for generating a pack unit by forming compressed video data into a block for each predetermined number of pictures and combining the compressed video data of the block, the compressed audio data corresponding thereto, and the auxiliary data corresponding thereto; and

a recording system that allocates data of the pack unit to a main sector and allocates the auxiliary data of the pack unit to a subcode sector to sequentially form recording tracks based on the main sector and the subcode sector,

wherein the auxiliary data of the main sector includes at least reproduction standard management information, which corresponds to time management information of the video data in a decoding mode and which is disposed in the order of pictures of the video data, and the auxiliary data of the subcode sector includes at least the reproduction standard management information and picture type information that are disposed in the order of pictures of the compressed video data, and~~The video tape recorder according to claim 1,~~

wherein the auxiliary data of the main sector includes, in addition to the reproduction standard management information, time information of the video data and/or the

audio data, which is disposed in the order of pictures of the video data, and the auxiliary data of the subcode sector includes time information of the video data and/or the audio data, which is disposed in the order corresponding to the auxiliary data of the main sector.

3. (Original) The video tape recorder according to claim 1, comprising:
search data generating means for generating search data from picture data by encoding within a frame in the video data; and auxiliary data generating means for generating auxiliary data for search related to the search data,
wherein the pack unit generating means further combines the search data and the auxiliary data to generate the pack unit, of the auxiliary data of the search data, search data of the video data recorded on the magnetic tape is recorded on the basis of the time management information of the video data in the decoding mode, and display data to be displayed with an image based on the search data is recorded on the basis of the time management information on reproduction and output of the video data.

4. (Original) The video tape recorder according to claim 3,
wherein the search data is tape position information indicating a position where the corresponding video data has been recorded.

5. (Original) The video tape recorder according to claim 3,
wherein the search data is management information on a reproduction standard of the corresponding video data.

6. (Original) The video tape recorder according to claim 3,
wherein the display data is time information of the corresponding video data.

7. (Currently Amended) A recording method for sequentially forming
recording tracks aslant on a magnetic tape and recording video data, audio data, and auxiliary
data related to the video data and the audio data onto the magnetic tape, comprising:

a data compressing step for compressing the video data and the audio data to
generate compressed video data and compressed audio data;

a pack unit generating step for generating a pack unit by forming compressed
video data into a block for each predetermined number of pictures and combining the
compressed video data of the block, the compressed audio data corresponding thereto, and the
auxiliary data corresponding thereto; and

a recording step for allocating data of the pack unit to a main sector and allocating
the auxiliary data of the pack unit to a subcode sector to sequentially form recording tracks based
on the main sector and the subcode sector,

wherein the auxiliary data of the main sector includes at least reproduction
standard management information, which corresponds to time management information of the
video data in a decoding mode and which is disposed in the order of pictures of the video data,
and the auxiliary data of the subcode sector includes at least the reproduction standard
management information and picture type information that are disposed in the order of pictures
of the compressed video data[[]], and

wherein the pack unit generating steps adds, to the main sector, a header data
indicating types of auxiliary data that are added to the main sector.

8. (Currently Amended) A recording method for sequentially forming recording tracks aslant on a magnetic tape and recording video data, audio data, and auxiliary data related to the video data and the audio data onto the magnetic tape, comprising:

a data compressing step for compressing the video data and the audio data to generate compressed video data and compressed audio data;

a pack unit generating step for generating a pack unit by forming compressed video data into a block for each predetermined number of pictures and combining the compressed video data of the block, the compressed audio data corresponding thereto, and the auxiliary data corresponding thereto; and

a recording step for allocating data of the pack unit to a main sector and allocating the auxiliary data of the pack unit to a subcode sector to sequentially form recording tracks based on the main sector and the subcode sector,

wherein the auxiliary data of the main sector includes at least reproduction standard management information, which corresponds to time management information of the video data in a decoding mode and which is disposed in the order of pictures of the video data, and the auxiliary data of the subcode sector includes at least the reproduction standard management information and picture type information that are disposed in the order of pictures of the compressed video data, and~~The recording method according to claim 7,~~

wherein the auxiliary data of the main sector includes, in addition to the reproduction standard management information, time information of the video data and/or the audio data, which is disposed in the order of pictures of the video data, and the auxiliary data of

the subcode sector includes time information of the video data and/or the audio data, which is disposed in the order corresponding to the auxiliary data of the main sector.